

LETTER TO THE EDITOR

W. Bryant

Director
Popular Science Syndicate
School of Sciences
Queensland, Australia

AGING IN WATER BIRDS

Dear Editor,

Your coverage in the journal edited by Dr. Yu (v. 20, No. 2, April 1997) was most enlightening. The hopes of Dr. Yu that these articles covering calorie restriction, exercise and oxidative stress will provide readers with valuable, updated information in aging is fulfilled. Perhaps I may be able to add a little more.

Many birds have extremely long life spans and show little signs of aging, despite a high metabolic rate, oxygen consumption and a gluttonous diet. Pigeons, the size of rats, with high metabolic rates can live 30 years. Over 50 years ago I began the study of how birds fly fantastic distances. A remarkable example is the swan. Perhaps this is the largest flying bird. I have seen reliable reports of mute swans weighing over 50 lbs. and measuring almost 6' with a 10' wing span. There are also reliable reports of several species of swans reaching over 50 years in captivity. Well observed is migration at enormous speed and height, approaching or exceeding that of Mt. Everest. Even more fantastic is that swans over 40 years of age will fly exactly the same speed and distance as the young ones. Little wonder that poets and composers have been inspired to write legends, poems and music about the beautiful swan.

As swans fly at speeds of 40-50 mph, they fill the air with continuous wide variations of sounds. This is another enormous expenditure of energy which makes migration even more fantastic. These birds are profoundly dedicated and mate for life. Before I move onto the scientific side of aging, let me remind everyone that these animals are threatened by pollution, hunting and destruction of habitat. We must all do more to ensure that they do not disappear, for a planet without swans is a dead one.

One of my students conducted research on water birds, commencing around 1974 (his first association with swans was over 40 years ago). They were fed a variety of diets including shellfish from the sea. These experiments clearly demonstrated that these birds need constant access to good water to remain ageless. A swan of 40 years of age looks and acts exactly like a young one, it flies at the same speed, fights with the same ability and swims with the same strength. The various diets and amounts they ate made little difference; clearly, it was access to good water that was important. Swans and ducks that had no access to water

would show signs of aging within 5 to 6 years (they were filthy and looked tattered and stressed). Those with access to a clean river or pond would remain ageless.¹ In hindsight, this was plain common sense because swans under ideal, natural conditions with access to good water are beautifully clean and graceful creatures. One is reminded of the childhood story of the ugly duckling that finally develops into the most beautiful of all birds. These studies also reinforced that one does not have to harm animals to study them.

¹ The student, Hans Semmelweis, published a book called *Is It Possible To Prevent Infections Such As The Common Cold, Cancer, AIDS, Etc. and Slow the Aging Process?* 1987, Super Science, ph: 304-523-1616. The book was published under pen name (Hans Semmelweis) in memory of Ignaz Semmelweis, the pioneer of hygiene for childbirth.